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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,782	02/13/2001	Christopher Cavallaro	B01-07	2005

7590

04/16/2003

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EXAMINER

HUNTER, ALVIN A

ART UNIT

PAPER NUMBER

3711

DATE MAILED: 04/16/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Art Unit: 3711



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 9

Application Number: 09/782,782
Filing Date: February 13, 2001
Appellant(s): CAVALLARO ET AL.

Troy Lester
Acushnet Company
For Appellant

EXAMINER'S ANSWER

MAILED
APR 16 2002
GROUP 3700

This is in response to the appeal brief filed February 5, 2003.

(1) Real Party in Interest

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A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

Appellant's brief includes a statement that claims 1-16 and 18-28 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

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6,248,027

Hayashi et al.

06-2001

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

Before providing the rejection of claims 1-16 and 18-28, it should be noted that the claim term "about" has not been defined at all by appellant. Indeed, it is noted that the main concern of the invention is to have an outer cover with a Shore D hardness greater than about 50 as stated in the Summary of the Invention on pages 7-9 of the specification. The invention is clearly directed to a golf ball having an outer cover hardness of any Shore D hardness greater than about 50, which was in original claim 1 and which was amended to avoid the anticipation by Hayashi et al.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16 and 18-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al. (USPN 6248027).

Hayashi et al. discloses a multi-piece golf ball, having improved flight distance, hitting feel, and controllability, comprising a solid inner core, outer core, inner cover, and outer cover (See Abstract). The inner core has a diameter of 20 to 37mm, a distortion of 3 to 8mm under a load of 100kg, a Shore D hardness of

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20 to 50, and a specific gravity of 1.0 to 1.7 (See Figure 1 and Column 4, lines 1 through 67). The outer core has a diameter of 32 to 41mm, a Shore D hardness of 40 to 70, and a specific gravity of 0.9 to 1.3 (See Figure 1 and Column 5, lines 1 through 35). The inner cover has a gage of 0.5 to 3mm and a Shore D hardness of at least 55 (See Figure 1). The outer cover has a gage of 0.3 to 3mm and a Shore D hardness of 35 to 53, or "about" 56 (See Figure 1). So the facts are that except for the "about 56" limitation, the claims are anticipated. The only issues in this application are whether the claims to "about 56" are met by "53" and if not would it have been obvious to raise the cover hardness of Hayashi et al. by 3 degrees hardness or 5%. With the outer cover having a gage of 0.3 to 3mm, the diameter of the inner layer would be from 33 to 47mm. Hayashi et al. notes that having a hard inner cover and soft outer cover improves the spin performance upon approach shots and improves the hitting feel, and maintains satisfactory flight performance (See Column 5, lines 63 through 67). Hayashi clearly explains what one skilled in the art knows –that each of these variables may be changed to achieve ball designs with desired characteristics. Note especially column 5, lines 63-67 and column 6, lines 48, through column 7, lines 67, which explains how characteristics may be varied, including by varying the outer cover hardness. And in addition, these changes are the very changes permitted by In re Gurley 31 USPQ2d 1130. Given the level of skill in this art, such a workman clearly has the skill to do routine optimization, including merely increasing the cover hardness by 3 degrees. As for the art not having to explicitly teach the same range, prima facie obviousness exists where the claimed ranges

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and the prior art do not overlap but are close enough that one skilled in the art would have expected them to have the same properties, *Titanium Metal Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). It is also noted that the applicant does not give any criticality as to why having a cover greater than about 56 would be more adequate than a golf ball having an outer cover of 51. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the inner cover hardness higher than the outer cover hardness by any small amount in difference, within the constraints taught by Hayashi et al., in order to optimize the spin performance, hitting feel, and flight performance. One having ordinary skill in the art would have expected the invention of Hayashi et al. to perform equally as well because of the outer cover being about 56. The golf ball's moment of inertia satisfies the equation $(1.52 \times \text{ball weight} + 12.79)$, in which the ball weights 44.5 to 45.93 grams (See Abstract). This gives the golf ball a moment of inertia of at least 80.43 $\text{g} \cdot \text{cm}^2$.

(11) Response to Argument

Appellant argues that prima facie obviousness had not been established by the examiner, because the Hayashi et al. reference used above did not claim an outer cover having a hardness in the claimed range as that of the appellant. The examiner respectfully disagrees.

As stated above, the appellant's invention hinges solely on having an outer cover with a Shore D hardness greater than "about" 50. Though the appellant claims an outer cover hardness greater than "about" Shore D 56, the

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appellant never discloses within the application what is considered to be "about". Hayashi et al. discloses an outer cover have Shore D hardness of up to 53 which can be considered to be close to 56, or "about" 56.

The appellant further attempts to prove that the reference teaches away by pointing to Column 5, lines 63 through 65, which states, "With the outer cover made softer in this manner, the spin performance upon approach shots is improved and the hitting feel upon approach shots and putting becomes soft." It appears that the appellant may have misinterpreted the teaching of Hayashi et al. Hayashi et al. is clearly noting the fact that having a outer cover softer than the inner cover has a benefit, which is to improve spin and soften the hitting feel. This would clearly motivate one having skill in the art to have an outer cover softer than the inner cover, but would not preclude any increase in cover hardness.

In regards to comments made within the Advisory Action, the appellant claims to take issue with the statements therein. The examiner would like to bring to the attention of the appellant, *In re Gurley*, 31 USPQ2d 1130. Within *In re Gurley*, a number of scenarios were arrived at where the appellant in the case did not set forth any improved properties, or any matter which would distinguish the invention as a whole from the reference. In *In re Gurley* the reference, which was relied upon by the examiner for rejection, was silent as to why one would use polyester-imide over epoxy. Given what is known of the rejection and the disclosure in the instant application, Hayashi et al discloses the outer cover having a Shore D hardness of 35 to 53 and notes that having the outer cover

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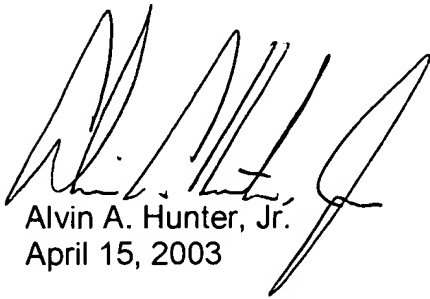
softer than the inner cover provides a desired benefit. The appellant's disclosure is clearly geared to having an outer cover with a Shore D hardness greater than about 50 in which there is no criticality as to why a hardness of Shore D 56 is beneficial over a hardness of 50. As stated in *In re Gurley*,

"Prior art reference that 'teaches away' from claimed invention is significant factor to be considered >in< determining obviousness but nature of such teaching is highly relevant, and must be weighed >in< substance; known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use."

As for the art not having to explicitly teach the same range, prima facie obviousness exists where the claimed ranges and the prior art do not overlap but are close enough that one skilled in the art would have expected them to have the same properties, *Titanium Metal Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). As discussed above, the applicant hinges on the outer cover being greater than about "50", without any criticality as to why a Shore D hardness of 56 would have improved benefit over having a Shore D hardness of 51. The applicant also makes reference to *In re Geisler*, 116 F.3d 1465, 43, USPQ2d 1362, 1365 (Fed. Cir. 1997). This case make reference to the usage of the term "about". As stated above, the appellant gives no indication as to what constitutes being "about". Though the outer cover hardness range does not explicitly overlap the range of the instant inventions outer cover, one would having ordinary skill in the art would come to the conclusion that Shore D 53 is of close enough variance to be considered as "about" 56.

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In summary, the appellant fails to define what constitutes "about" in respect to the outer cover. For the above reasons, it is believed that the rejections should be sustained.



Alvin A. Hunter, Jr.
April 15, 2003

Conferees



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Respectfully submitted,



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